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EXAMINER

SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/898,675	Applicant(s) RAKIB, SELIM SHLOMO	
	Examiner Annan Q. Shang	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2006.
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-14 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/26/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ellis et al (2003/0149988)** in view of **Yamamoto (6,169,845)**.

As to claim 1, note the **Ellis** reference figures 1-2, 7 and 9, discloses client server based interactive television program guide system with remote server recording and further discloses a gateway (User Television Equipment/Local Media Server 29 'UserTVE/LMS' 22/29, Set top box 'STB' 28 or Interactive Program Guide Television Equipment/Remote Server 'IPGTVE' 17, figs. 1, 7 and 9) that implements TIVO-like functions comprising:

a switching circuit having a plurality of input and output (I/O) ports (Tuner/Communication Circuitry 'Tuner/CC' of STB-28 or Satellite Receiver, figs. 7, 9 and pages 8-9, [0102] and [0112]);

a digital TV satellite receiver (see figs. 1-2, IPGTVE 17, UserTVE/LMS 22/29 also receives direct satellite link via link 20, page 4, [0062-0065]) having an input for coupling a satellite dish and an output for coupling to I/O port of the switching circuit;

an infrared or radio frequency receiver circuitry (infrared receiver of STB-28) for receiving commands and data from a wireless remote (Remote Control 'RC' 40 or User

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Input Device 46, pages 8-9, [0100], [0111] and [0116]) and coupled to I/O port of the switching circuit;

a modem or transceiver (Communication Device 'CD' 37/51, page 8, [0105-0107] and [0115]) coupled to I/O port of the switching circuit and having a port for coupling to a telephone line;

cable modem or transceiver means (Communication Device 'CD' 37/51, page 8, [0105-0107] and [0115]) coupled to I/O port of the switching circuit;

a network interface circuit or bus (Communication Device 'CD' 37/51, page 8, [0105-0107] and [0115]) couple to the switching circuit as well as to a port for connection to a local area network or external bus, note that STB-28 CD-37/51 is a network interface device to LAN devices, such as: Local Media Server 29 or Secondary Storage device 47, digital storage device 49, DVD, digital VCR, PC, etc.;

a rating shaping circuitry or bus driver (Control Circuitry/Processing Circuitry 'CC/ProC' 42 of STB-28) which is coupled to I/O port of the switching circuit for altering the bandwidth of the data routed through the rate shaping circuitry (page 8, [0102] and [0105]), note that STB-28 receives low and high frequency signals, from satellite, Internet link, serial or parallel link, network link, and other wired or wireless digital or analog link and alters the bandwidth of data routed through the devices on the LAN and STB-28 CC/ProC-42 exchanges data at high data rate between STB-28 and MF-12 or DF-16 to meet user interactive requests, on-demand (page 2, [0063-0065]);

a decompression and conversion circuit or one or more processing means (ProC or Display Circuitry 'DC' of STB 28, page 8, [0102], [0104]; page 9, [0108-0109]) having

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a digital data input (see figs. 7 and 9) coupled to I/O port of the switching circuit (Tuner/CC) and having video and audio analog signal output ports (to Display Device 45, figs 9-10 and page 10, [0116-0117]) and functioning to decompress digital video and audio data supplied by the switching circuit (Tuner/CC) and convert the decompressed digital video and audio data into analog video signals and audio signals at the video and audio analog output ports and to receive uncompressed data from the modem or the receiver and convert it to video and/or audio analog signals at the video and audio analog output ports respectively (page 4, [0068-0070] and page 14, [0158-0160]), note that ProC-33 of LMS-29 is also contained in STB-28 and UserTVE/LMS-22/29 or STB-28 receives digital compressed MPEG-2 data stream transmitted from Main facility (MF) 12 or Distribution Facility (DF) 16 or RMS-24 (page 6, [0088-0090]) and UserTVE/LocalMS-22/29 or STB-28, demultiplexes, decodes, encodes, conditional access, decryption, decompresses and converts (CC/ProC within STB-28 or Local-MS-29) the received data to analog NTSC for display of NTSC-TV 36/54 (page 14, [0157]), furthermore UserTVE/LocalMS-22/29 or STB-28 also receives IP data (which includes guide data, program data, etc.,) via communication path 20 (page 9, [0115]);

a hard disk (Hard Disk 'HD' 31, 32, 49, 63, etc., page 8, [0100-0101], [0110] and [0114]) coupled to the switching circuit (Tuner/CC);

a computer (CC-42 or ProC of STB-28 or LocalMS-29) coupled to I/O ports of the switching circuit (Tuner/CC) and configured to send data to and receive data from the switching circuit (note that Tuner/CC upon user's request records/playback programs to/from LocalMS-29 or R/P devices), and programmed to control the switching circuit in

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accordance with commands received from a wireless remote control (RC-40/46) via the receiver circuit to record digital video broadcast data on the hard disk in response to the command received from the wireless remote control (page 5, [0073-0074], [0083], page 8, [0100-0104] and page 11, [0125-0126]) and the computer configured to download program guide data via the modem and to perform on of timed recording, simultaneously recording, pausing, rewinding, fast forwarding and automatic recording functions in response to commands from the wireless remote control (page 14, [0152-0153] and [0162-0166]) and/or to control the switching circuit to supply IP or MPEG format packet data from the cable modem to the network interface circuit or bus driver for output to one or more peripherals or to the decompression and conversion circuit for conversion to analog video and/or analog signals at the video and audio output port for display on a conventional television, and programmed to control the switch to route selected data through the shaping circuitry and to control the rating shaping circuitry to alter the bandwidth of data routed through (page 9, [0108-0109, 0115]; page 14, [0157]); page 15, [0162-0166], note that the storage device 31 can be contained in STB-28 or external from the STB 28 and contained in LocalMS-29 (page 8, [0102] and [0104]), furthermore Processing circuitry (ProC or CC-42) can be contained in STB-28, LocalMS-29, R/P Devices or TV-36 and STB-28 receives and processes and converts the IP data, MPEG data to appropriate format for display on the analog NTSC TV display-36/54.

Ellis fails to explicitly teach a crossbar switching or router circuit having a plurality of input and output (I/O) ports.

However, note the **Yamamoto** reference figures 4-7, discloses moving-image data recording/reproducing apparatus for simultaneously recording/reproducing a plurality of moving image by using a plurality of moving-image I/O passages coupled to a crossbar switch (col.3, line 47-col.4, line 35 and line 36+).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Yamamoto into the system of Ellis in order to speed up the flow of information.

As to claim 2, Ellis further discloses where the gateway includes an MP3 server, for recording music, coupled to CC/ProC-42 of STB-28 and controlled by the computer to supply MP3 data to the network interface circuit or bus transceiver for output to LAN Devices coupled to the gateway via a LAN or external bus (page 3, [0060] and page 5, [0075]).

As to claim 3, the claimed "a gateway that implements TIVO-like functions..." is composed of the same structural element that were discussed in the rejection of claim 1 above.

As to claim 4, the claimed "a gateway that implements TIVO-like functions..." is composed of the same structural element that were discussed in the rejection of claim 1 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-9, 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ellis et al (2003/0149988)** in view of **Isono et al (6,216,171)**.

As to claims 7-8, note the **Ellis** reference figures 1-2, 7 and 9, discloses client server based interactive television program guide system with remote server recording and further discloses a gateway (User Television Equipment/Local Media Server 29 'UserTVE/LMS' 22/29, Set top box 'STB' 28 or Interactive Program Guide Television Equipment/Remote Server 'IPGTVE' 17, figs. 1, 7 and 9), comprising:

one or more transceiver means (a digital TV satellite transceiver see fig. 1 IPGTVE 17 which includes UserTVE/LocalMS 22/29, which receives digital or analog data from satellite link 20 via a distribution facility, page 4, [0062-0064]) for sending data to and receiving compressed data from a headend (Main Facility 'MF' 12, page 3, [0058-0060] and page 4, [0063-0065]) via one or more broadband, digital transmission mediums (IPGTVE-17);

one or more processing means (Processing Circuitry 'ProC' 33 or LocalMS-29 or CC/ProC-42 of STB 28, page 8, [0102], [0104]; page 9, [0108-0109]) having a digital data input (see figs. 7 and 9) coupled to the transceiver means, for performing at least MPEG transport demultiplexing, video decoding, MPEG encoding, conditional access and decryption and rate shaping functions (page 8, [0102] and [0108-0109] for transmission the data over a local network to the peripheral (LAN Devices, such as: DVDs, digital video tape, PC, digital and secondary storage devices), and for providing

at least rate shaping data to a rate compatible with available upstream bandwidth to the headend awarded to the gateway; note that UserTVE/LocalMS-22/29 or STB-28 receives digital compressed MPEG-2 data stream transmitted from MF-12, DF-16 or RMS-24 (page 6, [0088-0090]) and also receives IP data (guide data, program data, etc.,) via communication path 20 (page 9, [0115]), furthermore STB-28 receives low and high frequency signals, from satellite, Internet link, serial or parallel link, network link, and other wired or wireless digital or analog link and alters the bandwidth of data routed through the devices on the LAN and STB-28 CC/ProC-42 exchanges data at high data rate between STB-28 and MF-12 or DF-16 to meet user interactive requests, on-demand (page 2, [0063-0065]);

one or more IP video means (inherent to STB-28, page 4, [0068-0070]) for formatting the video and iData from the headend received from the processing means (CC/ProC-42) into IP packets;

a packet switch/router (Tuner/Communications 'Tuner/CC' of STB-28, page 4, [0068-0070], page 9, [0107]) having a plurality of input and output (I/O) ports, where I/O port of the packet switch/router is coupled to the IP video means and a I/O port of the packet switch/router is coupled to the processing means, for receiving data from the IP video means and routing the packets based upon data in routing tables to an appropriate destination and for receiving data packets address from the headend and routing the packets to the headend via using the processing means and the transceiver means; note that STB-28 uses IP protocol, and other suitable protocols to communicate

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data to/from LocalMS-29 and other Devices on the LAN and CC/ProC-42 routes data to appropriate Devices;

a server means (LocalMS-29 and other LAN Storage devices, page 8, [0100-0104], page 9, [0108-0110] and [0113-0114]) coupled to I/O port of the packet switch/router for by sending the appropriate menu or video data to the router for appropriate routing;

a computer (CC or ProC of STB-28 or LocalMS-29) coupled to I/O port of the packet switch/router (Tuner/CC) and programmed to receive commands and requests from peripherals (LAN Devices) coupled to the gateway (STB-28) and form the headend (MF-12 or DF-16) and to write data to routing tables to control routing operations by the packet/router (Tuner/CC of STB-28) to cause requested data commands to get to an appropriate destination for display of TV-36 or recording on LAN Storage Devices (page 5, [0073-0074], [0083], page 8, [0100-0104] and page 11, [0125-0126]);

one or more local area network interface circuits (Communication Device 'CD' 37/51, page 8, [0105-0107] and [0115]) coupled to the I/O port of the packet switch/router for sending data received from the packet switch/router to appropriate peripheral coupled to the local area network interface circuit by a local area network transmission medium (Ethernet, serial or parallel, page 9, [0108] and [0115]) and for receiving data and/or commands from a peripheral addressed to a process at the headend and for passing the data and commands to the router for routing to the appropriate destination (page 5, [0073-0074], [0083], page 8, [0100-0104] and page 11, [0125-0126]).

Ellis processes IP packets, but fails to explicitly teach encapsulating the video and Internet Data from headend and a DHCP server means coupled to the router for assigning IP addresses to client processes in the peripherals and the gateway and receiving data packets addressed to the headend and routing the packets to the headend via using the processing means and the transceiver means

However, note **Isono** reference discloses a Cable Modem Gateway 9 for receiving data and routing data accordingly to LAN devices, includes DHCP Server for assigning IP addresses to devices on the LAN and further encapsulating video and Internet data from the headend and permits devices on the LAN to communicate directly to the headend (figs. 1, 2 and col. 3, lines 9-56).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Isono into the system of Ellis to include a DHCP Server in a receiver to assign IP addresses and permit the headend or the service provider to communicate directly with devices on the LAN and route data to the LAN devices accordingly and further enable to LAN devices to communicate with each other.

As to claim 9, Ellis further disclose receiving an e-mail at the STB-28 and displaying at TV-36 (fig. 10, icon 118) where the user can interact to transmit messages via the STB-28 to the service provider (page 10, [0120]).

As to claim 12, Ellis further discloses where the computer is further programmed with HTTP web server for controlling the computer to serve web pages to browsers browsing the Internet via the packet switch/router and an interface means for interfacing

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to the Internet to provide an always-on connection to the Internet (fig. 10, page 10, [0117], [0120] and [0160]).

As to claim 14, Ellis further discloses a display (TV-36/45) coupled to a display adapter (display circuitry) which is coupled to the packet switch/router (Tuner/CC) and further comprising a input device (RC-40/46) coupled to an interface circuit which is coupled to the packet switch/router the input device and display (see fig. 9) for controlling the gateway by issuing commands to the computer and displaying user interface data and/or command and/or program icons on display (figs. 10-25), and where the packet switch/router (page 8, [0105-0107] and [0115]).

Ellis fails to explicitly teach where the LAN interface cards cooperate to allow any peripheral coupled to the LAN to any local area network interface card to communicate with any other peripheral coupled by a LAN to different LAN interface through the packet switch/router, however Isono teaches the claimed limitations as discussed with respect claim 7.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ellis et al (2003/0149988)** in view of **Yamamoto (6,169,845)**, and further in view of **Billerbeck et al (6,844,895)**

As to claim 5, Ellis as modified by Yamamoto, teach all the claimed limitations as previously discussed with respect to claim 1 above, but fail to explicitly teach altering the bandwidth of data routed through to match the available bandwidth of whatever data on which the data is to be transmitted.

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However, note the **Billerbeck** reference figure 3, discloses wireless intelligent host imaging, audio and data receiver, where Data Receiver Unit 'DR' 40 (a gateway), receives a broadcast signals, converts them to a digital format and does the necessary processing and compresses data to fit the available bandwidth of a bus to which it is communicating to Host 52 compresses data to meet available bandwidth (col. 3, line 33-col. 4, line 8 and col. 5, line 3-55).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Billerbeck into the system of Ellis as modified by Yamamoto to compressed the digital data to meet the available bandwidth on the network in order to efficiently transmit data across the LAN devices.

Claim 6 is met as previously discussed with respect to claim 2.

6. Claims 10-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ellis et al (2003/0149988)** in view of **Isono et al (6,216,171)** as applied to claim 7 above, and further in view of **Tidwell et al (2001/0043687)**

As to claims 10-11 and 13, Ellis as modified by Isono, fail to teach to explicitly teach voicemail and its claimed limitations.

However, **Tidwell** teaches a STB or TV-12 for receiving voicemail capabilities where incoming calls can be routed to the telephone and controlling the outgoing calls (page 2, [0030-0033], [0036], [0045-0047] and [0055].

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the teaching of Tidwell into the system of Ellis as

modified by Isono to provide voicemail and telephone services within the gateway to enable user of the various LAN devices to communicate directly with each other and via telephone or voicemail while watching television

Response to Arguments

7. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection. With respect to claims 1-6, amendment to the independent claims necessitated the new ground(s) of rejection discussed above.

With respect to amended independent claim 7, Applicant cites portions of the office action and argues that, "Applicant could not verify that these assertions were taught or disclosed in the prior art as indicated in the Office Action. For example, the Applicant could not verify the assertion that figs. 7, 9 and paragraphs [0102] and [0112] of Ellis discloses or teaches a Tuner/Communication circuitry 'Tuner/CC' of STB-28' as stated in the office action."

In response, Examiner disagrees. Examiner notes applicant's arguments, however paragraph [0112] states that "A more generalized embodiment of user television equipment 22 of fig.7 is shown in fig.9. As shown in fig.9, program guide data program guide distribution facility 16 (fig.1) is received by control circuitry 42 of user television equipment 22. The functions of control circuitry 42 may be provided using the set-top box arrangement of fig.7. Alternatively, these functions may be integrated into the advance television receiver (e.g., a digital television receiver or high definition

television (HDTV) receiver), personal computer television (PC/TV), or any other suitable arrangement. If desired, combination of such arrangements may be used." Besides the cited paragraph by applicant, Examiner further cited paragraphs [0068-0070], page 9, [0107]) which disclose the various communications protocols used by the LAN.

Furthermore Ellis discloses communication device 37 within the STB (fig.7). In order to receive video and other data the TV receiver (or receivers inherently includes tuner(s)) tunes to a channel(s) using the Tuner/CC-42 of the STB-28 and the various communications device within the STB-28. The STB further includes router/switching capabilities to process received video and data and router to appropriate storage device and further retrieves stored data as discussed in the office action above. With respect to claims 7-14, applicant's amended claims do not overcome the prior acts of records. Furthermore the 103(a) rejection as being unpatentable over Ellis in view of Isono, are in the same field of endeavor, i.e., a TV home LAN system, as well as 103(a) rejection of Ellis in view of Isono and further in view of Tidwell. Hence the 103(a) rejection is proper, meets all the amended claimed limitations as discussed above and maintained. This office action is made final.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Benayoun et al (7,006,498) disclose system for transmitting LAN data frames through an asynchronous transfer mode (ATM) crossbar switch.

Jones (6,882,645) discloses apparatus and method for sequencing memory operations in an asynchronous switch fabric.

Susuki (6,625,160) disclose minimum bandwidth guarantee for cross-point buffer switch.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Annan Q. Shang** whose telephone number is **571-272-7355**. The examiner can normally be reached on **700am-400pm**.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Christopher S. Kelley** can be reached on **571-272-7331**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the **Electronic Business Center (EBC)** at **866-217-9197 (toll-free)**.



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